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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q66356

Yasumichi KUWAYAMA , et al.

Appln. No.: 09/960,741

Group Art Unit: 3729

Confirmation No.: 5032

Examiner: Rick Kiltae Chang

Filed: September 24, 2001

For: METHOD OF CONNECTING TERMINAL TO WIRE

RESPONSE TO ELECTION OF SPECIES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Sir:

This paper is responsive to the Office Action mailed on January 5, 2004, for the above-identified application.

Applicants elect Species I, Figures 2A-2C, without traverse. The readable claims on the elected species are claims 1-12.

Applicants are also submitting a copy of the claims with reference numbers handwritten therein, as requested by the Examiner.

Applicants reserve the right to file a Divisional Application directed to non-elected Species II.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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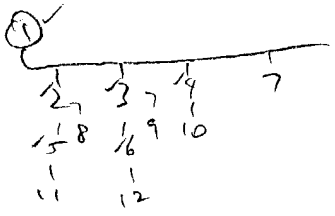
WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: February 5, 2004



* See claims 1, 2 and 13. Duplicate reference numbers of the limitations are omitted.

What Is Claimed Is:

1. A method of connecting a terminal (1) to a wire, (8) comprising the steps of:

forming inwardly-directed projecting portions (2,3, 33,34) in a bent manner respectively at distal ends of a pair of clamping piece portions (4,5,35,36) which are continuous with each other and form a wire connection portion (7) of a terminal;

locating a conductor portion (9) of a wire on inner sides of the pair of clamping piece portions; and

pressing the pair of clamping piece portions over an entire periphery thereof into a circular shape so as to extend in a peripheral direction, thereby causing projecting extension portions (2',3',33',34') , including the projecting portions, to bite into the conductor portion of the wire.

2. The method of claim 1, wherein the pressing step is effected by a rotary swaging machine. (16)

3. The method of claim 1, wherein the pressing step is effected, while the projecting portions of the pair of clamping piece portions are joined together.

4. The method of claim 1, further comprising:

forming the pair of projecting portions to have the same length and the same bending angle.

5. The method of claim 2, further comprising:

forming the pair of projecting portions to have the same length and the same bending angle.

6. The method of claim 3, further comprising:

forming the pair of projecting portions to have the same length and the same bending angle.

7. The method of claim 1, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions to bite slightly into an outer peripheral surface of the conductor portion.

8. The method of claim 2, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions to bite slightly into an outer peripheral surface of the conductor portion.

9. The method of claim 3, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions

to bite slightly into an outer peripheral surface of the conductor portion.

10. The method of claim 4, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions to bite slightly into an outer peripheral surface of the conductor portion.

11. The method of claim 5, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions to bite slightly into an outer peripheral surface of the conductor portion.

12. The method of claim 6, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be curved; and

causing distal ends of the projecting portions to bite slightly into an outer peripheral surface of the conductor portion.

13. The method of claim 1, further comprising:

forming a first one (34) of the projecting portions of the pair of clamping piece portions to be shorter (35,36)

than a second one of the projecting portions;

bending the first one of the projecting portions inwardly at a deep angle; and

bending the second one of the projecting portions inwardly at a shallow angle,

wherein when the pressing step is effected, one of the projecting extension portions, including the first one of the projecting portions, is caused to bite into the conductor portion of the wire while the other one of the projecting extension portions, including the second one of the projecting portions, is held in intimate contact with an outer peripheral surface of the conductor portion.

14. The method of claim 13, wherein a distal end of the other one of the projecting extension portions is joined to a bent proximal end of the one of the projecting extension portions while the one of the projecting extension portions is caused to bite into the conductor portion of the wire.

15. The method of claim 13, wherein a biting direction of the one of the projecting extension portions is deviated outwardly from an axis of the conductor portion of the wire.

16. The method of claim 14, wherein a biting direction

of the one of the projecting extension portions is deviated outwardly from an axis of the conductor portion of the wire.

17. The method of claim 13, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be bent;

causing a distal end of the first one of the projecting portions to bite slightly into the outer peripheral surface of the conductor portion; and

superposing the second one of the projecting portions on an outer side of a bent proximal end of the first one of the projecting portions.

18. The method of claim 14, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be bent;

causing a distal end of the first one of the projecting portions to bite slightly into the outer peripheral surface of the conductor portion; and

superposing the second one of the projecting portions on an outer side of a bent proximal end of the first one of the projecting portions.

19. The method of claim 15, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be bent;

causing a distal end of the first one of the projecting portions to bite slightly into the outer peripheral surface of the conductor portion; and

superposing the second one of the projecting portions on an outer side of a bent proximal end of the first one of the projecting portions.

20. The method of claim 16, further comprising:

before the pressing step, provisionally pressing the pair of clamping piece portions to be bent;

causing a distal end of the first one of the projecting portions to bite slightly into the outer peripheral surface of the conductor portion; and

superposing the second one of the projecting portions on an outer side of a bent proximal end of the first one of the projecting portions.